Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (previously presented) A control system for a Light Emitting Diode (LED) based light system, comprising:

a plurality of light source assemblies, each light source assembly comprising a light source of a first color and a light source of a second color, the first and second colors being different;

a plurality of feedback units for generating feedback signals representative of luminance and chrominance characteristics; and

a controller in signal communication with said plurality of feedback units configured to provide drive signals to the light source assemblies during respective non-overlapping intervals such that a light source of the first color in a first light source assembly and a light source of the first color in a second light source assembly are driven at non-overlapping intervals and such that a light source of the second color in the first light source assembly and a light source of the second color in the second light source assembly are driven at non-overlapping intervals and to adjust said drive signals on a per-light source assembly and a per-light source basis in response to feedback signals from said plurality of feedback units.

2. (original) The system of claim 1, wherein a feedback unit of said feedback units further comprises:

a sensor for sensing luminance and chrominance characteristics during one of said non-overlapping intervals, wherein said non-overlapping interval is associated with said sensor and with one of said light source assemblies.

3. (original) The system of claim 1, wherein a feedback unit of said feedback units further comprises:

a sample-and-hold module for sampling feedback signals from a sensor during a non-overlapping interval of said non-overlapping intervals and holding feedback

signals during other non-overlapping intervals, wherein said non-overlapping interval is associated with said sample-and-hold module.

4. (previously presented) The system of claim 1, wherein each light source assembly further comprises a light source of a third color, wherein the first color is red, the second color is green, and the third color is blue and wherein the drive signals are provided such that a light source of the third color in the first light source assembly and a light source of the third color in the second light source assembly are driven at non-overlapping intervals.

5. (original) The system of claim 1, wherein:

said controller acquires differences between said feedback signals and a reference value and adjusts said drive signals on a per-color basis to compensate for said differences.

6. (original) The system of claim 5, further comprising:

a reference value generator for converting a reference input to CIE 1931 tristimulus reference values; and

a feedback signal translator for converting a feedback signal of said feedback signals to CIE 1931 tristimulus measured values, wherein

said controller acquires differences between said feedback signals and a reference value by determining a difference between said CIE 1931 tristimulus reference values and said CIE 1931 tristimulus measured values for each of said feedback signals.

7. (original) The system of claim 5, further comprising:

a reference value generator for:

converting a reference input to CIE 1931 tristimulus reference values; and

translating said CIE 1931 tristimulus reference values to tristimulus reference values in RGB space, wherein

said controller acquires differences between said feedback signals and a reference value by determining a difference between said tristimulus reference values in RGB space and said feedback signals.

8. (original) The system of claim 1, further comprising:

a light guide panel for directing light from said light source assemblies to said feedback units, wherein said feedback units provide feedback related to luminance and chrominance characteristics within said light guide panel related to light source assemblies with which said feedback units are associated.

9. (original) The system of claim 1, wherein:

said controller provides said drive signals for a signal duration no longer than said non-overlapping interval; and

said controller adjusts said drive signals on a per-color basis by changing said signal duration from a first duration to a second duration, wherein said second duration is no longer than said non-overlapping interval.

10. (previously presented) A method for controlling a Light Emitting Diode (LED) light system, comprising:

providing drive signals to a plurality of light source assemblies during respective non-overlapping intervals, wherein each light source assembly comprises a light source of a first color and a light source of a second color with the first and second colors being different, the drive signals being provided to the light source assemblies such that a light source of the first color in a first light source assembly and a light source of the first color in a second light source assembly are driven at non-overlapping intervals and such that a light source of the second color in the first light source assembly and a light source of the second color in the second light source assembly are driven at non-overlapping intervals;

receiving light source assembly-specific and color-specific feedback signals in response to said providing drive signals to the plurality of light source assemblies during respective non-overlapping intervals; and

adjusting said drive signals on a per-light source assembly and a per-color basis in response to the light source assembly-specific and color-specific feedback signals.

11. (original) The method of claim 10, wherein said providing includes:

providing said drive signals in repeating sequential non-overlapping intervals.

12. (original) The method of claim 10, wherein said adjusting includes:

acquiring differences between said light source-specific feedback signals and a reference value; and

adjusting said drive signals on a per-color basis to compensate for said differences.

13. (original) The method of claim 10, further comprising:

receiving a reference input;

converting said reference input to said reference value;

comparing said reference value to said light source-specific feedback signals.

14. (original) The method of claim 10, further comprising:

receiving a reference input;

converting said reference input to said reference value, wherein said reference value includes CIE 1931 tristimulus values;

converting said light source-specific feedback signals to CIE 1931 tristimulus values; and

comparing said reference value to said light source-specific feedback signals.

15. (original) The method of claim 10, further comprising:

generating said light source-specific feedback signals according to luminance and chrominance characteristics of light from said light sources.

16. (previously presented) A Light Emitting Diode (LED) based light system, comprising:

a plurality of light source assemblies, each light source assembly comprising a red LED, a green LED, and a blue LED;

a plurality of feedback units, each of the feedback units being in optical communication with at least one of the light source assemblies; and

a controller in signal communication with the light source assemblies and the feedback units and configured to:

provide drive signals to the light source assemblies at non-overlapping intervals such that a red LED in a first light source assembly and a red LED in a second light source assembly are driven at non-overlapping intervals, such that a green LED in the first light source assembly and a green LED in the second light

source assembly are driven at non-overlapping intervals, and such that a blue LED in the first light source assembly and a blue LED in the second light source assembly are driven at non-overlapping intervals;

receive light source assembly-specific and color-specific feedback signals from the feedback units in response to the drive signals that are provided at non-overlapping intervals; and

adjust the drive signals provided to the light source assemblies on a light source assembly-specific and a color-specific basis in response to the light source assembly-specific and color-specific feedback signals.

17. (original) The LED-based light system of claim 16 wherein the feedback units include color sensors for detecting luminance and chrominance characteristics of light.

18. (previously presented) The LED-based light system of claim 16 wherein the feedback units include color sensors for generating color-specific feedback signals.

19. (previously presented) The LED-based light system of claim 18 wherein the controller is configured to provide light source assembly-specific and color-specific drive signals to the light sources in response to the light source assembly-specific and color-specific feedback signals.

20. (previously presented) The LED-based light system of claim 16 wherein:

the feedback units include color sensors for generating color-specific feedback signals; and

the controller is configured to provide light source assembly-specific and color-specific drive signals to the light source assemblies in response to the light source assembly-specific and color-specific feedback signals.